

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. - 5. (Cancelled)

6. (Currently Amended) A mechanical resonator comprising:

a vibration body operable to perform mechanical resonant vibration;

first fixed ends provided to the vibration body at a constant pitch; and

an electrode located in a vicinity of the vibration body and operable to vibrate in a resonance mode at a same resonant frequency as the vibration body; and

second fixed ends provided to the electrode at the constant pitch in the same direction with the first fixed ends,

wherein the second fixed ends of the electrode are arranged deviated relative to the first fixed ends of the vibration body by half of the constant pitch.

7. - 18. (Cancelled)

19. (Currently Amended) A mechanical resonator according to claim 6, comprising:

a vibration body operable to perform mechanical resonant vibration;

an electrode located in a vicinity of the vibration body and operable to vibrate in a resonance mode at a same resonant frequency as the vibration body; and

further including a bias power source connected to the vibration body and the electrode and operable to generate an electrostatic field between the vibration body and the electrode;

the vibration body being operable to resonantly vibrate when a voltage change at resonant frequency is provided between the vibration body and the electrode.

20. (Currently Amended) A mechanical resonator according to claim 6, comprising:
a vibration body operable to perform mechanical resonant vibration;
an electrode located in a vicinity of the vibration body and operable to vibrate in a resonance mode at a same resonant frequency as the vibration body; and
further including a detection section operable to detect a signal from a voltage change between the electrode and the vibration body;
wherein the detecting section is operable to detect a signal converted from a vibration body into an electric signal due to an electrostatic capacitance change between the vibration body and the electrode during vibration of the vibration body.

21. (Previously Presented) A mechanical resonator according to claim 6, wherein an insulation layer is provided between at least a portion of the electrode and the vibration body.

22. - 25. (Cancelled)

26. (New) A mechanical resonator according to claim 6, further including a bias power source connected to the vibration body and the electrode and operable to generate an electrostatic field between the vibration body and the electrode;
the vibration body being operable to resonantly vibrate when a voltage change at resonant frequency is provided between the vibration body and the electrode.

27. (New) A mechanical resonator according to claim 6, further including a detection section operable to detect a signal from a voltage change between the electrode and the vibration body;
wherein the detecting section is operable to detect a signal converted from a vibration body into an electric signal due to an electrostatic capacitance change between the vibration body and the electrode during vibration of the vibration body.